

US-PAT-NO: 6374300

DOCUMENT-IDENTIFIER: US 6374300 B1

TITLE: Method and system for storing load balancing information
with an HTTP cookie

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Application Filing Date - AD (1):
19990715

Brief Summary Text - BSTX (16):

In accordance with additional aspects of the present invention, until the HTTP request is provided to the server array controller, the method provides for employing the server array controller to buffer communication between the sender and the destination. Also, when the HTTP request is provided to the server array controller, **replaying** in consecutive order the buffered communication to at least one of the plurality of node servers that is associated with the destination.

Detailed Description Text - DETX (11):

When a client's browser program is requesting a URL from an HTTP server on the Internet, the browser will **match the requested URL** against all of the URLs stored in the client's Cookies. If the requested URL **matches any of the stored URLs**, a line containing the name/value pairs of all matching Cookies will be included in the HTTP request. An exemplary line in a Cookie for an HTTP request could be included as follows: Cookie: NAME1=OPAQUE_STRING1; NAME2=OPAQUE_STRING2.

Detailed Description Text - DETX (61):

FIG. 8 illustrates an overview of how certain data packets between the client and a selected node server 274 are buffered and **replayed** by a server array controller's proxy server 270. A rectangular graphical representation of the proxy server 270 is vertically disposed along the center portion of this figure. Also, positioned along the center line of the developed length of the proxy server 270 is a time line 271 that starts with an initial value of "zero" near the top of the graphical representation of the proxy server. On the left side of the proxy server 270 is a graphical representation of a client 272 transmitting and receiving data packets along the developed length (and time line 271) of the proxy server. Similarly on the right side of the proxy server 270 is a graphical representation of a node server 274 transmitting and receiving data packets along the developed length of the proxy server.

Detailed Description Text - DETX (64):

Once the Cookie determination is made, the proxy server 270 will sequentially replay the transmitting and receiving of the three groups of data packets with the selected node server 274. On the right side of the graphical representation of the proxy server 270, these three groups of data packets are replayed between the proxy server 270 and the node server 274. First, a TCP SYN 276B data packet is transmitted from the proxy server 270 to the node server 274, followed by an exchange of TCP SYN/ACK.ACK 278B data packets and next a HTTP REQUEST 280B data packet is transmitted to the node server 274 by the proxy server 270.

Detailed Description Text - DETX (65):

Moving further down the length of the graphical representation of the proxy server 270, a data packet(s) for an HTTP RESPONSE 282A is provided to the proxy server 270 by the selected node server 274. The proxy server 270 immediately replays this data packet to the client 272 in HTTP RESPONSE 282B. Next, the client 272 exchanges TCP FIN.ACK.FIN.ACK 284B data packets with the proxy server 270. The proxy server 270 immediately replays these data packets to the node server 274 as TCP FIN.ACK.FIN.ACK 284A data packets.

Detailed Description Text - DETX (66):

It is important to note that the present invention only employ the proxy server 270 to buffer and store data packets until the HTTP request is received. Once the HTTP request is received, the proxy server will replay all of the buffered data packets for the selected node server 274 and switch to a forwarding mode for subsequent data packets, i.e., the proxy server will immediately replay all subsequent data packets transmitted by the client 272 to the selected node server.